REMARKS

The Office Action dated May 17, 2007 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1-3, 5-18, 21 and 22 have been amended to more particularly point out and distinctly claim the subject matter of the invention. Claim 23 has been added. No new matter has been added. Claims 1-23 are submitted for consideration.

Claims 1-22 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,823,303 to Su. The rejection is traversed as being based on a reference that neither teaches nor suggests the novel combination of features clearly recited in claims 1-22.

Claim 1, upon which claims 2-12 depend, recites a method of encoding speech in a communications system. The method includes receiving a speech signal including voice signals and background signals and detecting voice activity and providing an indicator when no voice activity is detected. The method also includes encoding the speech signal to generate a plurality of parameters representing the signal and when the indicator is not present, outputting a first parametric representation of the speech signal including the plurality of parameters, and, when the indicator is present, modifying at least one of the plurality of parameters and outputting a second parametric representation of the speech signal including the modified parameter.

Claim 13, upon which claims 14-17 depend, recites a speech encoding apparatus configured to encode speech. The apparatus includes an input configured to receive a speech signal including voice signals and background signals and a voice activity detector configured to detect voice activity and to provide an indicator when no voice activity is detected. The apparatus also includes an encoder configured to encode the speech signal to generate a plurality of parameters representing the signal and modifying circuitry configured to modify, when the indicator is present, at least one parameter of the plurality of parameters. The apparatus further includes an output at which a first parametric representation of the speech signal is output when the indicator is not present, the first parametric representation including the plurality of parameters, and at which a second parametric representation of the speech signal is output when the indicator is present, the second parametric representation including the modified parameter.

Claim 18 recites an apparatus for encoding speech. The apparatus includes receiving means for receiving a speech signal including voice signals and background signals and detecting means for detecting voice activity and providing an indicator when no voice activity is detected. The apparatus also includes encoding means for encoding the speech signal to generate a plurality of parameters representing the signal. The apparatus further includes outputting means for, when said indicator is not present, outputting a first parametric representation of the speech signal including said plurality of parameters, and, when the indicator is present, modifying at least one of the parameters

and outputting a second parametric representation of the speech signal including the modified parameter.

Claim 19 recites a communications system configured to encode speech. The system includes input means for receiving a speech signal including voice signals and background signals and voice activity detection means for detecting voice activity and to provide an indicator when no voice activity is detected. The system also includes encoder means for encoding the speech signal to generate a plurality of parameters representing the signal and modifying means for modifying, when the indicator is present at least one of the parameters. The system further includes output means for outputting, when the indicator is not present, a first parametric representation including said plurality of parameters, and for outputting a second parametric representation of the speech signal when the indicator is present, the second parametric representation including the modified parameter.

Claim 20, upon which claim 21 depends, recites a network entity for use in a wireless communications network, the network entity being configured to encode speech. The network entity includes an input configured to receive a speech signal including voice signals and background signals and a voice activity detector configured to detect voice activity and to provide an indicator when no voice activity is detected. The network entity also includes an encoder configured to encode the speech signal to generate a plurality of parameters representing the signal and modifying circuitry configured to modify, when the indicator is present, at least one parameter of the plurality

of parameters. The network entity further includes an output at which a first parametric representation of the speech signal is output when the indicator is not present, the first parametric representation including the plurality of parameters, and at which a second parametric representation of the speech signal is output when the indicator is present, the second parametric representation including the modified parameter.

Claim 22 recites a computer program including a code sequence which, when executed on a computer, encodes speech by implementing the following method steps. The method includes receiving a speech signal including voice signals and background signals, detecting voice activity and providing an indicator when no voice activity is detected and encoding the speech signal to generate a plurality of parameters representing the signal. The method also includes when the indicator is not present, outputting a first parametric representation of the speech signal including the plurality of parameters, and, when the indicator is present, modifying at least one of the plurality of parameters and outputting a second parametric representation of the speech signal including the modified parameter.

As outlined below, the cited reference of Su does not teach or suggest the all of the elements of the pending claims.

Su discloses that a multi-rate speech codec supports a plurality of encoding bit rate modes by adaptively selecting encoding bit rate modes to match communication channel restrictions. In higher bit rate encoding modes, an accurate representation of speech through CELP (code excited linear prediction) and other associated modeling

parameters are generated for higher quality decoding and reproduction. For each bit rate mode selected, pluralities of fixed or innovation subcodebooks are selected for use in generating innovation vectors. The speech coder distinguishes various voice signals as a function of their voice content. For example, a Voice Activity Detection (VAD) algorithm selects an appropriate coding scheme depending on whether the speech signal includes active or inactive speech. The encoder may consider varying characteristics of the speech signal including sharpness, a delay correlation, a zero-crossing rate, and a residual energy. In another embodiment of the present invention, code excited linear prediction is used for voice active signals whereas random excitation is used for voice inactive signals; the energy level and spectral content of the voice inactive signal may also be used for noise coding. See at least the Abstract.

Applicant submits that Su does not teach or suggest each of the elements of the pending claims. The Office Action alleged that Su teaches detecting voice activity and providing an indicator when no voice activity is detected and when the indicator is not present, outputting a first parametric representation of the speech signal including the plurality of parameters, and, when the indicator is present, modifying at least one of the plurality of parameters and outputting a second parametric representation of the speech signal including the modified parameter, as recited in the pending claims. The VAD of Su does not provide an indicator when no voice activity is detected, wherein the indicator is used for determining which parametric representation of the speech signal is outputted.

Su discloses that the first stage of operations is performed by the speech encoder. Specifically, a source encoder processing circuitry performs high pass filtering of a speech signal. After such filtering, the source encoder processing circuitry applies a perceptual weighting filter which operates to emphasize the valley areas of the filtered speech signal. If the encoder processing circuitry selects operation in a pitch preprocessing (PP) mode, a pitch preprocessing operation is performed on the weighted speech signal. The pitch preprocessing operation involves warping the weighted speech signal to match interpolated pitch values that will be generated by the decoder processing circuitry. When pitch preprocessing is applied, the warped speech signal is designated a first target signal. If pitch preprocessing is not selected, the weighted speech signal passes through without pitch preprocessing and is designated the first target signal. The encoder processing circuitry applies a process wherein a contribution from an adaptive codebook is selected along with a corresponding gain which minimize a first error signal that includes the difference between the first target signal and a weighted, synthesized contribution from the adaptive codebook. The resultant excitation vector is applied after adaptive gain reduction to both a synthesis and a weighting filter to generate a modeled signal that best matches the first target signal. The encoder processing circuitry uses LPC (linear predictive coding) analysis to generate filter parameters for the synthesis and weighting filters. Next, the encoder processing circuitry designates the first error signal as a second target signal for matching using contributions from a fixed codebook. The encoder processing circuitry searches through at least one of the plurality of

subcodebooks within the fixed codebook in an attempt to select a most appropriate contribution while generally attempting to match the second target signal. See at least Col. 2, lines 32-65 of Su.

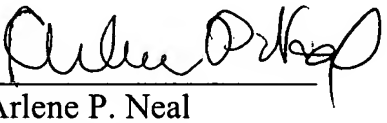
There is no disclosure in the cited sections of Su of using an indicator for determining which parametric representation of the speech signal is outputted. Instead, Su discloses the selection of various modes and processing the signal according to the selected mode. Therefore, Applicant respectfully asserts that the rejection under 35 U.S.C. §102(e) should be withdrawn because Su does not teach or suggest each feature of claims 1, 13, 18-20 and 22 and hence, dependent claims 2-12, 14-17 and 21 thereon.

As noted previously, claims 1-23 recite subject matter which is neither disclosed nor suggested in the prior art references cited in the Office Action. It is therefore respectfully requested that all of claims 1-23 be allowed and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosures: Additional Claim Fee Transmittal
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